

MATH 3012 - APPLIED COMBINATORICS - SPRING 2010
Mitchel T. Keller

FULL SEMESTER SCHEDULE OVERVIEW

Week	Class	Between	Class	Between	Class	Between
11 Jan 10 1	Course policies. Distribute TurningPoint clickers.		Ch 1: Course overview		Ch 2: Strings, permutations, combinations	
18 Jan 10 2	MLK Day No Class		Ch 2 - Combinatorial Proofs		Ch 2 - More on Binomial Coefficients	
25 Jan 10 3	Ch 2 - Lattice Paths		Ch 2 - Binomial and Multinomial Theorems		Ch 3 - Recursive statements	
1 Feb 10 4	Ch 3 - Euclidean algorithm		Ch 3 - Induction		Ch 4 - Graph Theory (Intro)	
8 Feb 10 5	Ch 4 - Graph Theory (Euler)		Ch 4 - Graph Theory (Hamiltonian)		Ch 4 - Graph Theory (Coloring)	
15 Feb 10 6	Ch 4 - Graph Theory (Coloring)		Ch 4 - Graph Theory (Planarity)		<i>Test 1</i>	
22 Feb 10 7	Ch 4 - Graph Theory (Labeled trees)		Ch 5 - Posets (Intro)		Ch 5 - Posets (Intro)	
1 Mar 10 8	Ch 5 - Posets (Dilworth)		Ch 5 - Subset lattice		Ch 5 - Interval orders (Last day to drop)	
8 Mar 10 9	Ch 5 - Representations for Interval Orders		Ch 5 - Dilworth for Interval Orders		Ch 6 - Inclusion/ Exclusion	
15 Mar 10 10	Ch 6 - Inclusion/ Exclusion		Ch 7 - Generating Functions (Basics)		Ch 7 - Generating Functions (Partitions)	
22 Mar 10 11	SPRING BREAK					
	No class					

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Week	Class	Between	Class	Between	Class	Between
29 Mar 10 12	Ch 7 - Generating Functions (RUBOTs)		<i>Test II</i>		Ch 8 - Recurrence equations (intro)	
5 Apr 10 13	Ch 8 - Recurrence equations (homog)		Ch 8 - Recurrence equations (nonhomog)		Ch 10 - Spanning Trees Group project drafts due	
12 Apr 10 14	Ch 10 - Spanning Trees		Ch 10 - Shortest paths		Ch 11 - Network flows, cuts	
19 Apr 10 15	Ch 11 - Labelling Algorithm Group project written component due		Ch 12 - Bipartite matching		<i>Test III</i>	
26 Apr 10 16	Ch 12 - Chain partitioning		Ch 9 - Ramsey Theory Group project virtual presentations due		Ch 9 - Ramsey Theory and Probability	
3 May 10 Finals			FINAL EXAM 1450-1740			